

WHAT IS CLAIMED:

- 1     1. A fluid supply system for supplying a first fluid or a
- 2     second fluid to a press, the fluid supply system comprising:
- 3         a first supply line plumbed to supply the first fluid to the
- 4         press;
- 5         a first supply valve in said first supply line to control
- 6         flow in the first supply line;
- 7         a second supply line plumbed to supply the second fluid to
- 8         the press;
- 9         a second supply valve in said second supply line to control
- 10         flow in the second supply line;
- 11         a first return line connected to drain fluid from the press;
- 12         a conduit in communication with said first and second supply
- 13         lines and said first return line; and
- 14         a conduit valve in said conduit to control flow through the
- 15         conduit, wherein opening the conduit valve enables fluid from the
- 16         first or the second supply line through the conduit to by-pass
- 17         the press.

1       2. The fluid supply system of claim 1, further comprising:  
2             a programmable logic controller connected to actuate at  
3             least one of said first supply valve, second supply valve, and  
4             conduit valve to control fluid flow through the fluid supply  
5             system.

1       3. The fluid supply system of claim 2, further comprising:  
2             a pump in communication with said programmable logic  
3             controller, said pump further being connected to at least one of  
4             said first supply line, said second supply line, said first  
5             return line and said second return line for selectively moving  
6             fluid therethrough.

1       4. The fluid supply system of claim 3, further comprising:  
2             a first fluid supply line adapted to be connected to a first  
3             fluid supply source;  
4             a first fluid return line adapted to be connected to said  
5             first fluid supply source;  
6             a second fluid supply line adapted to be connected to a  
7             second fluid supply source; and

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8           a second fluid return line adapted to be connected to said  
9       second fluid supply source.

1       5. The fluid supply system of claim 2, further comprising a  
2       first sensor means electrically connected to said programmable  
3       logic controller for detecting a fluid level in a first fluid  
4       supply source.

1       6. The fluid supply system of claim 2, further comprising  
2       second sensor means electrically connected to said programmable  
3       logic controller, for detecting a fluid level in said second  
4       fluid supply source.

1       7. The fluid supply system of claim 5, wherein said first  
2       sensor means is a non-contact level sensor.

1       8. The fluid supply system of claim 6, wherein said second  
2       sensor means is a non-contact level sensor.

1       9. The fluid supply system of claim 2, wherein said conduit  
2       valve is electrically connected to said programmable logic  
3       controller.

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1       10. The fluid supply system of claim 3, further comprising:  
2                 a cleaning fluid supply source for containing cleaning  
3                 fluid, said cleaning fluid supply source being connected to said  
4                 pump, said cleaning fluid supply source in combination with said  
5                 pump being adapted to circulate water in a predetermined manner  
6                 through at least two of said first supply line, said second  
7                 supply line, said first return line, said second return line,  
8                 said supply tube, said drain tube, and said conduit.

1       11. The fluid supply system of claim 9, wherein cleaning fluid  
2                 in said cleaning fluid supply source is maintained at a  
3                 predetermined elevated temperature by a heating element.

1       12. The fluid supply system of claim 11, wherein said first  
2                 supply line is thermally coupled to said cleaning fluid of said  
3                 cleaning fluid supply source for selectively heating said first  
4                 fluid.

1       13. The fluid supply system of claim 11, wherein said second  
2                 supply line is thermally coupled to said cleaning fluid of said

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3       cleaning fluid supply source for selectively heating said second  
4       fluid.

1       14. The fluid supply system of claim 1, wherein said first fluid  
2       is aqueous fluid, and said second fluid is a fluid that is  
3       reactive to ultra-violet light.

1       15. The fluid supply system of claim 9, wherein when said  
2       conduit valve means is positioned to allow cleaning fluid from a  
3       cleaning fluid source to be pumped by a pump through said first  
4       supply line, said first valve member, said conduit, said supply  
5       tube and said drain tube to clean the fluid supply system.

1       16. A method of supplying fluid to a press, said method  
2       comprising the steps of:

3           supplying a first fluid to and from said press via a supply  
4       tube and a drain tube respectively, said supply tube and said  
5       drain tube being connected by a conduit means, said conduit means  
6       comprising a first valve in a closed position;

7           stopping the supply of said first fluid

8           draining said first fluid from said press via said drain  
9       tube;

10 switching from said first fluid to a cleaning fluid;  
11 adjusting said conduit means to an open position which  
12 allows fluid flow therethrough;  
13 supplying said cleaning fluid through said supply tube, said  
14 drain tube and said conduit means;  
15 stopping the supply of said cleaning fluid;  
16 draining said cleaning fluid from said supply tube, said  
17 drain tube and said conduit means;  
18 switching from said cleaning fluid to a second fluid;  
19 placing said first valve in a closed position to prevent  
20 fluid flow therethrough; and  
21 supplying a second fluid to and from said press via said  
22 supply tube and said drain tube.

1 17. The method of claim 16, further comprising the step of  
2 stopping the supply of said second fluid.

1 18. The method of claim 17, further comprising the step of  
2 draining said second fluid from said press via said drain tube.

1 19. The method of claim 18, wherein said method is repeated  
2 after said step of draining said second fluid from said press.

1       20. The method of claim 18, further comprising the steps of:  
2              switching from said second fluid to said cleaning fluid;  
3              adjusting said conduit means to allow fluid flow  
4              therethrough;  
5              supplying said cleaning fluid through said supply tube, said  
6              drain tube and said conduit means;  
7              stopping the supply of said cleaning fluid; and  
8              draining said cleaning fluid.

1       21. The method of claim 16, wherein said conduit means further  
2              comprises a second valve.

1       22. A fluid supply structure, comprising:  
2              a container bung adapted to fit in a lid portion of a  
3              container;  
4              a fluid supply line for supplying a fluid from said  
5              container to a printing system, attached and extending through  
6              said container bung into said container;  
7              a fluid return line, for returning a fluid to said container  
8              from a printing system, attached to and having a portion  
9              extending through said container bung into said container; and

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10       a sensor, positioned on said container bung adapted to  
11       measure a fluid level in said container.

1       23. The fluid supply structure of claim 22, wherein said fluid  
2       return line has a plurality of slots on the portion extended  
3       through said container bung for dissipating gases from said fluid  
4       line to aid the minimization of foaming of said fluid.

